Appendix C. Source and Accuracy of Estimates

SOURCE OF DATA

The data were collected during the fourth interview of the 1987 panel and the seventh interview of the 1986 panel of the Survey of Income and Program Participation (SIPP) in a supplement to the standard questionnaire. The SIPP universe is the noninstitutionalized resident population living in the United States and at least 15 years of age.[1] However, the information collected for the supplement from persons living in group quarters were not included in the tabulations shown in this report.

Each of the 1986 and 1987 panels of the SIPP sample are located in 230 Primary Sampling Units (PSUs) each consisting of a county or a group of contiguous counties. Within these PSUs, expected clusters of two living quarters (LQs), were systematically selected from lists of addresses prepared for the 1980 decennial census to form the bulk of the sample. To account for LQs built within each of the sample areas after the 1980 census, a sample was drawn of permits issued for construction of residential LQs up until shortly before the beginning of the panel. In jurisdictions that do not issue building permits, small land areas were sampled and the LQs within were listed by field personnel and then clusters of four LQs were subsampled. In addition, sample LQs were selected from supplemental frames that included LQs identified as missed in the 1980 census and persons residing in group quarters at the time of the Census.

Approximately 16,300 living quarters were originally designated for the 1986 panel and approximately 16,700 for the 1987 panel. For Wave 1 of the 1986 panel, interviews were obtained from the occupants of about 11,500 of the 16,300 designated living quarters. For Wave 1 of the 1987 Panel about 11,700 interviews were obtained from the 16,700 designated living quarters. Most of the remaining 4,800 living quarters in the 1986 panel and 5,000 living quarters in the 1987 panel were found to be vacant, demolished, converted to nonresidential use, or otherwise ineligible for the survey.

However, approximately 900 of the 4,800 living quarters in the 1986 panel and 800 of the 5,000 living quarters in the 1987 panel were not interviewed because the occupants refused to be interviewed, could not be found at home, were temporarily absent, or were otherwise unavailable. Thus, occupants of about 93 percent of all eligible living quarters participated in Wave 1 of the Survey for both the 1986 and 1987 panels. Sample loss at Wave 1 of the 1986 and 1987 panels was about 7 percent and increased to roughly 18.5 percent at the end of Wave 5. Further noninterviews increased the sample loss about 1 percent for each of the remaining waves.

For Waves 2 through 7, only original sample persons (those in Wave 1 sample households and interviewed in Wave 1) and persons living with them were eligible to be interviewed. With certain restrictions, original sample persons were to be followed if they moved to a new address. When original sample persons moved without leaving a forwarding address or moved to extremely remote parts of the country and no telephone number was available, additional noninterviews resulted.

Noninterviews. Tabulations in this report were drawn from interviews conducted from January through May of 1988. Table C-1 summarizes information on nonresponse for the interview months in which the data used to produce this report were collected.

Some respondents don't respond to some of the questions. Therefore, the overall nonresponse rate for some items such as income and money related items is higher than the nonresponse rates in the above table. (See Appendix D.)

Estimation. The estimation procedure used to derive SIPP person weights involved several stages of weight adjustments. In the first wave, each person received a base weight equal to the inverse of his/her probability of selection. For each subsequent interview, each person received a base weight that accounted for following movers.

A noninterview adjustment factor was applied to the weight of every occupant of interviewed households to account for households which were eligible for the sample but were not interviewed. (Individual nonresponse within partially interviewed households was treated

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[1] The noninstitutionalized resident population includes persons living in group quarters, such as dormitories, rooming houses, and religious group dwellings. Crew members of merchant vessels, Armed Forces personnel living in military barracks, and institutionalized persons, such as correctional facility inmates and nursing home residents, were not eligible to be in the survey. Similarly, United States citizens residing abroad were not eligible to be in the survey. With these qualifications, persons who were at least 15 years of age at the time of interview were eligible to be interviewed.

Table C-1 Sample Size, by Month and Interview Status

Month	Panel/ Wave/ Rotation	Eligible	Noninter-viewed	Nonre-sponse rate (%)*
Jan. '88	'86/7/1	3,000	400	13
Feb. '88	'86/7/2	3,200	500	15
	'87/4/2	3,000	300	9
Mar. '88	'86/7/3	3,100	400	14
	'87/4/3	3,100	300	10
Apr. '88	'86/7/4	3,100	400	13
	'87/4/4	3,000	300	10
May '88	'87/4/1	3,100	300	10

* Due to rounding of all numbers at 100, there are some inconsistencies. The percentage was calculated using unrounded numbers.

with imputation. No special adjustment was made for noninterviews in group quarters.) A factor was applied to each interviewed person's weight to account for the SIPP sample areas not having the same population distribution as the strata from which they were selected.

An additional stage of adjustment to persons' weights was performed to reduce the mean square error of the survey estimates by ratio adjusting SIPP sample estimates to monthly Current Population Survey (CPS) estimates[2] of the civilian (and some military) noninstitutional population of the United States by age, race, Hispanic origin, sex, type of householder (married, single with relatives, single without relatives), and relationship to householder (spouse or other). The CPS estimates were themselves brought into agreement with estimates from the 1980 decennial census which were adjusted to reflect births, deaths, immigration, emigration, and changes in the Armed Forces since 1980. Also, an adjustment was made so that a husband and wife within the same household were assigned equal weights.

RELIABILITY OF THE ESTIMATES

SIPP estimates in this report are based on a sample; they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaire, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey: nonsampling and sampling. We are able to provide estimates of the magnitude of SIPP sampling error, but this is not true of nonsampling error. Found below are descriptions of sources of SIPP nonsampling error, followed by a discussion of sampling error, its estimation, and its use in data analysis.

[2]These special CPS estimates are slightly different from the published monthly CPS estimates. The differences arise from forcing counts of husbands to agree with counts of wives.

Nonsampling variability. Nonsampling errors can be attributed to many sources, e.g., inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness on the part of the respondents to provide correct information, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, biases resulting from the differing recall periods caused by the rotation pattern and failure to represent all units within the universe (undercoverage). Quality control and edit procedures were used to reduce errors made by respondents, coders and interviewers. More detailed discussions of the existence and control of nonsampling errors in the SIPP can be found in the *Quality Profile for the Survey of Income and Program Participation*, May 1990, by Jabine, assisted by King and Petroni.

Undercoverage in SIPP results from missed living quarters and missed persons within sample households. It is known that undercoverage varies with age, race, and sex. Generally, undercoverage is larger for males than for females and larger for blacks than for nonblacks. Ratio estimation to independent age-race-sex population controls partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that persons in missed households or missed persons in interviewed households have different characteristics than the interviewed persons in the same age-race-sex group. Further, the independent population controls used have not been adjusted for undercoverage in the decennial census.

The Bureau has also used complex techniques to adjust the weights for nonresponse, but the success of these techniques in avoiding bias is unknown.

Comparability with other statistics. Caution should be exercised when comparing data from this report with data from earlier SIPP publications or with data from other surveys. The comparability problems are caused by the seasonal patterns for many characteristics and by different nonsampling errors. In particular, this report includes data from the farm population which in the past has been excluded from Quarterly Reports. For further information about the farm population, see Appendix B of any of the earlier quarterly reports such as P-70, No. 6, *Economic Characteristics of Households in United States: Fourth Quarter 1984*.

Sampling variability. Standard errors indicate the magnitude of the sampling error. They also partially measure the effect of some nonsampling errors in response and enumeration, but do not measure any systematic biases in the data. The standard errors for the most part measure the variations that occurred by chance because a sample rather than the entire population was surveyed.

The sample estimate and its standard error enable one to construct confidence intervals, ranges that would include the average result of all possible samples with a known probability. For example, if all possible samples were selected, each of these being surveyed under essentially the same conditions and using the same sample design, and if an estimate and its standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.

2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.

3. Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

The average estimate derived from all possible samples is or is not contained in any particular computed interval. However, for a particular sample, one can say with a specified confidence that the average estimate derived from all possible samples is included in the confidence interval.

Standard errors may also be used for hypothesis testing, a procedure for distinguishing between population parameters using sample estimates. The most common types of hypotheses tested are 1) the population parameters are identical versus 2) they are different. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the parameters are different when, in fact, they are identical.

To perform the most common hypothesis test, compute the difference $X_A - X_B$, where X_A and X_B are sample estimates of the parameters of interest. A later section explains how to derive an estimate of the standard error of the difference $X_A - X_B$. Let that standard error be s_{DIFF}. If $X_A - X_B$ is between -1.6 times s_{DIFF} and +1.6 times s_{DIFF}, no conclusion about the parameters is justified at the 10 percent significance level. If on the other hand, $X_A - X_B$ is smaller than -1.6 times s_{DIFF} or larger than +1.6 times s_{DIFF}, the observed difference is significant at the 10 percent level. In this event, it is commonly accepted practice to say that the parameters are different. Of course, sometimes this conclusion will be wrong. When the parameters are, in fact, the same, there is a 10 percent chance of concluding that they are different.

Note when using small estimates. Summary measures (such as means, medians, and percent distributions) are shown in the report only when the base is 200,000 or greater. Because of the large standard errors involved, there is little chance that summary measures would reveal useful information when computed on a smaller base. Estimated numbers are shown, however, even though the relative standard errors of these numbers are larger than those for the corresponding percentages. These smaller estimates are provided primarily to permit such combinations of the categories as serve each user's needs. Also, care must be taken in the interpretation of small differences. For instance, in case of borderline difference, even a small amount of nonsampling error can lead to a wrong decision about the hypotheses, thus distorting a seemingly valid hypothesis test.

Standard error parameters and tables and their use. To derive standard errors that would be applicable to a wide variety of statistics and could be prepared at a moderate cost, a number of approximations were required. Most of the SIPP statistics have greater variance than those obtained through a simple random sample of the same size because clusters of living quarters are sampled for SIPP. Two parameters (denoted "a" and "b") were developed to calculate variances for each type of characteristic.

The "a" and "b" parameters vary by subgroup. Table C-5 provides "a" and "b" parameters for Total or White Households and for Black Households. The "a" and "b" parameters may be used to directly calculate the standard error for estimated numbers and percentages. Because the actual variance behavior was not identical for all statistics within a group, the standard errors computed from parameters provide an indication of the order of magnitude of the standard error for any specific statistic.

For those users who wish further simplification, we have also provided general standard errors in tables C-3 and C-4. Note that these standard errors must be adjusted by an "f" factor from table C-5. The general standard errors are easier to use because there is no need to compute square roots, but they are slightly less accurate. Methods for using these parameters and tables for computation of standard errors are given in the following sections.

Standard errors of estimated numbers of households. The approximate standard error, s_x, of an estimated number of households shown in this report can be obtained in two ways. Note that this method should not be applied to dollar values. It may be obtained by use of the formula

$$s_x = fs \qquad (1)$$

where f is the appropriate "f" factor from table C-5, and s is the standard error on the estimate obtained by interpolation from table C-3. Alternatively, it may be approximated by the following formula, (2), from which

the standard errors in table C-3 were calculated. Use of this formula will provide more accurate results than the use of formula (1) above.

$$s_x = \sqrt{ax^2 + bx} \qquad (2)$$

Here x is the size of the estimate and "a" and "b" are the parameters associated with the particular type of characteristic being estimated.

Illustration of the computation of the standard error of an estimated number of households. Suppose SIPP estimates show that there were 8,916,000 HHs with a householder less than 35 years of age where the average monthly household income during 1988 was $900 to $1,999. The appropriate "a" and "b" and "f" parameters from table C-5 and the appropriate general standard error from table C-3 are

a = -.0000691, b = 6,284, f = 1.00, s = 224,000

Using formula (1), the approximate standard error is

s_x = 1.00 x 224,000 = 224,000

Table C-3. **Standard Errors of Estimated Numbers of Households**

(Numbers in thousands)

Size of estimate	Standard error	Size of estimate	Standard error
200	35	10,000	236
300	43	15,000	281
500	56	25,000	338
750	68	30,000	355
1,000	79	40,000	375
2,000	111	50,000	376
3,000	135	60,000	358
5,000	172	70,000	318
7,500	208	80,000	246
		90,000	76

Using formula (2), the approximate standard error is

$$\sqrt{(-.0000691)(8,916,000)^2 + (6,284)(8,916,000)} = 226,000$$

The 90-percent confidence interval as shown by the data is from 8,554,000 to 9,278,000. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 90 percent of all samples.

Standard errors of estimated percentages. The reliability of an estimated percentage, computed using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. When the numerator and denominator of the percentage have different parameters, use the parameter (or appropriate factor) of the numerator.

There are two types of percentages presented in this report. The first is the percentage of households with a particular characteristic such as the percent of households owning their own home. The second type is the percentage of net worth such as the percent of net worth of households that is held in vehicles. The percentage of net worth may be expressed as

$$\frac{\hat{P}_A \overline{X}_A}{\overline{X}_N}, \qquad (3)$$

where $\hat{P}_A$ is the percentage of households holding a particular asset, $\overline{X}_A$ is the mean value of holdings for a particular asset and $\overline{X}_N$ is the mean value of net worth. Another example of the second type is the percent of net worth held by households with low income. In this case, $\hat{P}_A$ is the percentage of all households that have low income, $\overline{X}_A$ is the mean net worth of low income households and $\overline{X}_N$ is the mean net worth of all households.

For the percentage of households, the approximate standard error, s_p, of the estimated percentage p can be obtained by the formula

$$s_p = fs \qquad (4)$$

In this formula, f is the appropriate "f" factor from table C-5 and s is the standard error on the estimate from table C-4. Alternatively, it may be approximated by the following formula, (5), from which the standard errors in table C-4 were calculated. Use of this formula will give more accurate results than use of formula (4) above.

$$s_p = \sqrt{\left[\frac{b}{x}\right] p(100-p)} \qquad (5)$$

Here x is the size of the subclass of households which is the base of the percentage, p is the percentage $(0 < p < 100)$, and b is the parameter associated with the characteristics in the numerator.

For the percentage of net worth, the approximate standard error is given by

$$S_p = \sqrt{\left[\frac{\hat{P}_A \overline{X}_A}{\overline{X}_N}\right]^2 \left[\left[\frac{S_p}{\hat{P}_A}\right]^2 + \left[\frac{S_A}{\overline{X}_A}\right]^2 + \left[\frac{S_B}{\overline{X}_N}\right]^2\right]}, \qquad (6)$$

where S_P is the standard error of $\hat{P}_A$, S_A is the standard error of $\overline{X}_A$ and S_B is the standard error of $\overline{X}_N$. (To calculate S_p, use formula (5). The standard errors of $\overline{X}_N$ and $\overline{X}_A$ are given in tables C-7 and C-13.)

It should be noted that there is some correlation between $\hat{P}_A$ and $\overline{X}_N$, and between $\overline{X}_A$ and $\overline{X}_N$. In most cases, the above formula would give an overestimate of the standard error.

Illustration of the computation of the standard error of an estimated percentage of households. Suppose that of 26,599,000 households with mean monthly household income of $900 to $1,999, 11.3 percent were Black. Using formula (4) with the "f" factor from table C-5 and the appropriate standard error from table C-4, the approximate standard error is

$$s_p = 0.43 \times 0.83 = 0.36$$

Using formula (5) with the "b" parameter from table C-5, the approximate standard error is

$$s_p = \sqrt{\frac{4,342}{26,599,000} \, 11.3(100-11.3)} = 0.40$$

Consequently, the 90 percent confidence interval as shown by these data is from 10.7 to 11.9 percent.

Table C-4. Standard Errors of Estimated Percentages of Households

Base of estimated percentage (thousands)	Estimated percentage					
	1 or 99	2 or 98	5 or 95	10 or 90	25 or 75	50
200	1.8	2.5	3.9	5.3	7.7	8.9
300	1.4	2.0	3.2	4.3	6.3	7.2
500	1.1	1.6	2.4	3.4	4.9	5.6
750	0.9	1.3	2.0	2.8	4.0	4.6
1.000	0.8	1.1	1.7	2.4	3.4	4.0
2,000	0.6	0.8	1.2	1.7	2.4	2.8
3,000	0.5	0.6	1.0	1.4	2.0	2.3
5,000	0.4	0.5	0.8	1.1	1.5	1.8
7,500	0.3	0.4	0.6	0.9	1.3	1.5
10,000	0.25	0.4	0.6	0.8	1.1	1.3
15,000	0.20	0.3	0.5	0.6	0.9	1.0
25,000	0.16	0.2	0.4	0.5	0.7	0.8
30,000	0.14	0.2	0.3	0.4	0.6	0.7
40,000	0.12	0.2	0.3	0.4	0.5	0.6
50,000	0.11	0.16	0.2	0.3	0.5	0.6
60,000	0.10	0.14	0.2	0.3	0.4	0.5
80,000	0.09	0.12	0.2	0.3	0.4	0.4
90,000	0.08	0.12	0.18	0.3	0.4	0.4

Table C-5. Generalized Variance Parameters

Households	a	b	f
Total or White	-0.0000691	6,284	1.00
Black	-0.0004329	4,342	0.83

Illustration of the computation of the standard error of an estimated percentage of net worth. Of all household assets in the report, 6 percent was held in vehicles (table D). The mean value of vehicles is $6,205 (table 1) and the mean value of net worth is $92,017 (table H). The standard error of the 86.3 percent of households that own vehicles (table A) is 0.24 percent, the standard error of the mean value of vehicles owned

by households is $62 (table C-7) and the standard error of the mean value of net worth of households is $1,838 (table C-7). Using the formula (6), the approximate standard error is

$$s_p = \sqrt{\left[\frac{(86.3)\,(6,205)}{92,017}\right]^2 \left[\left[\frac{0.24}{86.3}\right]^2 + \left[\frac{62}{6,205}\right]^2 + \left[\frac{1,838}{92,017}\right]^2\right]}$$

$$= .13\%$$

Consequently, the 90 percent confidence interval as shown by these data is from 5.8 to 6.2 percent.

Standard error of a difference within this report. The standard error of a difference between two sample estimates is approximately equal to

$$s_{(x-y)} = \sqrt{s_x^2 + s_y^2} \qquad (7)$$

where s_x and s_y are the standard errors of the estimates x and y.

The estimates can be numbers, percents, ratios, etc. The above formula assumes that the sample correlation coefficient, r, between the two estimates is zero. If r is really positive (negative), then this assumption will lead to overestimates (underestimates) of the true standard error.

Illustration of the computation of the standard error of a difference within this report. SIPP estimates show that in 1988 the mean value of total household wealth for White households is $101,329 and the mean value of total household wealth for Black households is $23,651 (table H in the report). The standard errors for these estimates are given in table C-7. They are $2,097 and $1,016, respectively. Assuming that these two estimates are not correlated, the standard error of the estimated difference of $77,678 is

$$s_{(x-y)} = \sqrt{(2,097)^2 + (1,016)^2} = \$2,330$$

The 90% confidence interval is from $73,950 to $81,406.

Standard error of a mean. A mean is defined here to be the average quantity of some item (other than persons, families, or households) per household. For example, it could be the average monthly household income of households with a householder aged less than 35 years. The standard errors of all means published in this report have been provided in tables C-7 and C-13.

Standard error of a median. The median quantity of some item such as income for a given group of persons, families, or households is that quantity such that at least half the group have as much or more and at least half

Table C-6. Standard Errors for the Median Value of Holdings of Asset Owners, by Selected Characteristics: 1988

(In dollars. Excludes persons in group quarters. For meaning of symbols, see text)

Characteristic	Net worth	Interest earning assets at financial institutions[1]	Other interest-earning assets[2]	Regular checking accounts	Stocks and mutual fund shares	Equity in business or profession
Total	779	100	579	10	231	393
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER						
White	924	121	732	10	270	875
Black	446	52	770	32	457	1 345
Hispanic origin[4]	796	188	4 336	48	1 161	1 810
AGE OF HOUSEHOLDER						
Less than 35 years	291	54	436	13	168	869
35 to 44 years	1 264	104	935	23	283	2 483
45 to 54 years	1 953	272	918	36	494	5 024
55 to 64 years	2 684	467	2 138	36	1 214	4 703
65 years and over	1 950	618	1 972	36	954	3 271
65 to 69 years	4 414	1 017	3 795	56	2 086	4 986
70 to 75 years	4 807	1 365	5 646	76	2 247	6 159
75 years and over	2 711	1 279	3 390	56	1 131	15 685
EDUCATION OF HOUSEHOLDER						
Less than 12 years	1 129	269	1 386	18	541	4 713
High school: 4 years	1 420	149	1 630	17	244	1 003
College: 1 to 3 years	1 628	99	1 190	16	414	1 359
4 or more years	2 390	154	775	29	514	1 908
TYPE OF HOUSEHOLD BY AGE OF HOUSEHOLDER						
Married-couple households	1 139	143	802	18	181	1 324
Less than 35 years	686	75	579	17	139	1 368
35 to 54 years	1 605	111	1 133	26	329	3 452
55 to 64 years	6 069	490	2 466	43	1 280	3 779
65 years and over	6 099	1 034	4 284	52	2 024	4 832
Male householder	988	191	1 059	32	421	3 312
Less than 35 years	414	95	953	34	339	2 230
35 to 54 years	1 870	278	2 667	61	1 065	5 815
55 to 64 years	4 430	1 444	5 056	110	3 353	13 462
65 years and over	5 543	1 024	11 658	101	5 385	10 343
Female householder	1 023	201	1 371	15	389	711
Less than 35 years	181	68	1 484	17	297	1 600
35 to 54 years	1 016	164	1 496	28	649	892
55 to 64 years	3 648	706	3 200	30	3 105	3 120
65 years and over	2 048	798	2 377	35	1 176	4 797
LABOR FORCE ACTIVITY OF HOUSEHOLDERS UNDER 65 YEARS						
Total	763	52	855	11	263	442
With labor force activity	774	52	520	11	197	425
With job entire period	903	54	513	13	206	866
With job part of period	1 635	223	3 039	40	512	1 537
No job during period, spent time looking or on layoff	972	514	4 728	56	2 860	1 361
No labor force activity	2 158	461	5 541	29	1 627	5 140
MONTHLY HOUSEHOLD INCOME						
Lowest quintile	390	157	1 249	19	410	1 669
Second quintile	1 484	258	1 056	14	180	1 082
Third quintile	1 405	118	1 174	21	289	1 891
Fourth quintile	1 677	138	1 245	27	303	2 427
Highest quintile	4 755	299	1 461	28	502	2 619
REGION						
Northeast	2 428	199	577	20	575	1 591
Midwest	1 231	124	1 151	20	206	3 479
South	1 004	138	1 421	24	413	1 246
West	2 259	267	1 999	33	314	2 029
TENURE						
Owner	985	116	865	17	147	2 413
Renter	118	58	1 154	13	361	1 483

See footnotes at end of table.

Table C-6. **Standard Errors for the Median Value of Holdings of Asset Owners, by Selected Characteristics: 1988**—Con.

(In dollars. Excludes persons in group quarters. For meaning of symbols, see text)

Charactersitic	Equity in motor vehicles	Equity in own home	Rental property equity	Other real estate equity	U.S. savings bonds	IRA or KEOGH accounts	Other assets[3]
Total	54	468	2 132	733	38	254	1 202
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER							
White	56	500	2 246	748	40	193	1 226
Black	93	988	5 357	218	26	79	6 911
Hispanic origin[4]	146	2 074	11 403	3 411	81	1 164	3 517
AGE OF HOUSEHOLDER							
Less than 35 years	71	663	4 618	1 317	17	131	469
35 to 44 years	105	1 082	2 369	1 568	36	379	1 971
45 to 54 years	141	1 506	3 927	1 997	89	474	3 142
55 to 64 years	145	1 203	4 993	2 073	113	451	2 539
65 years and over	137	1 015	3 748	1 779	170	734	1 443
65 to 69 years	211	1 741	8 828	2 408	213	1 036	2 396
70 to 75 years	240	1 900	4 414	1 939	749	1 862	3 342
75 years and over	135	1 650	7 553	3 631	372	1 596	2 988
EDUCATION OF HOUSEHOLDER							
Less than 12 years	83	814	3 964	2 146	101	557	3 377
High school: 4 years	91	898	3 790	1 613	58	468	2 075
College: 1 to 3 years	111	1 175	4 329	1 664	43	320	1 154
4 or more years	117	1 540	3 149	1 799	67	279	1 872
TYPE OF HOUSEHOLD BY AGE OF HOUSEHOLDER							
Married-couple households	71	772	2 359	885	44	243	1 203
Less than 35 years	94	751	4 715	1 283	20	337	789
35 to 54 years	113	896	2 566	1 359	45	350	2 168
55 to 64 years	238	1 801	5 072	2 388	122	599	2 819
65 years and over	209	1 470	8 907	2 368	391	1 081	2 008
Male householder	79	1 268	5 574	2 233	117	581	3 434
Less than 35 years	121	1 718	9 198	4 293	134	204	562
35 to 54 years	122	1 971	8 533	3 692	196	521	8 044
55 to 64 years	308	3 715	54 694	10 307	305	1 353	16 669
65 years and over	340	3 660	10 301	8 373	452	1 289	9 852
Female householder	55	885	2 994	1 711	68	410	4 115
Less than 35 years	94	1 884	7 578	4 806	28	699	4 616
35 to 54 years	103	2 491	6 407	1 620	51	523	3 365
55 to 64 years	141	2 123	20 065	3 640	237	866	6 043
65 years and over	264	1 546	5 004	3 692	212	1 527	3 136
LABOR FORCE ACTIVITY OF HOUSEHOLDERS UNDER 65 YEARS							
Total	57	606	1 989	804	26	165	970
With labor force activity	60	646	1 797	879	26	129	562
With job entire period	61	679	1 872	922	27	132	668
With job part of period	158	3 721	11 702	1 213	124	1 392	5 447
No job during period, spent time looking or on layoff	311	4 135	18 515	13 533	189	3 321	2 559
No labor force activity	172	2 127	9 239	2 186	145	629	3 751
MONTHLY HOUSEHOLD INCOME							
Lowest quintile	56	1 081	3 680	2 444	157	821	2 972
Second quintile	65	995	3 016	1 118	69	742	2 806
Third quintile	95	1 114	5 084	1 715	46	471	3 350
Fourth quintile	107	1 120	3 666	1 280	52	332	2 294
Highest quintile	126	1 480	3 706	1 632	59	473	1 613
REGION							
Northeast	121	1 635	4 732	2 495	69	476	2 001
Midwest	110	877	3 698	1 909	72	322	1 356
South	89	767	2 131	1 096	70	426	1 614
West	121	1 678	4 296	1 946	67	544	2 282
TENURE							
Owner	73	468	2 292	819	43	328	1 260
Renter	52	(B)	3 270	1 667	35	421	2 885

[1]Includes passbook savings accounts, money market deposit accounts, certificates of deposit, and interest-earning checking accounts.
[2]Includes money market funds, U.S. Government securities, municipal and corporate bonds, and other interest-earning assets.
[3]Includes mortgages held from sale of real estate, amount due from sale of a business, unit trusts, and other financial investments.
[4]Persons of Hispanic origin may be of any race.

Table C-7. Standard Errors for the Mean Value of Asset Holdings of Asset Owners, by Selected Characteristics: 1988

(In dollars. Excludes persons in group quarters. For meaning of symbols, see text)

Characteristic	Net worth	Interest earning assets at financial institutions[1]	Other interest-earning assets[2]	Regular checking accounts	Stocks and mutual fund shares	Equity in business or profession
Total	1 838	473	2 701	35	2 688	4 984
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER						
White	2 097	512	2 781	38	2 832	5 282
Black	1 016	455	(B)	58	469	7 620
Hispanic origin[4]	2 737	1 108	(B)	69	2 710	6 681
AGE OF HOUSEHOLDER						
Less than 35 years	1 110	228	4 031	38	953	4 912
35 to 44 years	2 728	625	4 496	40	6 030	5 666
45 to 54 years	7 780	1 275	5 454	85	3 136	15 950
55 to 64 years	5 744	1 438	5 468	140	4 009	14 996
65 years and over	4 098	1 398	6 425	104	9 485	12 189
65 to 69 years	6 835	2 236	14 171	228	5 609	14 955
70 to 74 years	10 543	3 027	9 848	184	34 129	24 307
75 years and over	4 840	2 147	8 495	125	4 991	31 481
EDUCATION OF HOUSEHOLDER						
Less than 12 years	1 911	996	9 602	68	1 713	10 908
High school: 4 years	2 406	757	4 273	49	1 697	8 676
College: 1 to 3 years	4 562	1 047	6 105	64	2 593	14 595
4 or more years	5 837	1 017	4 203	102	6 642	6 462
TYPE OF HOUSEHOLD BY AGE OF HOUSEHOLDER						
Married-couple households	3 034	636	3 628	51	3 858	6 352
Less than 35 years	1 764	264	2 371	58	1 082	5 605
35 to 54 years	5 310	772	3 741	56	4 864	9 574
55 to 64 years	8 564	1 861	6 733	200	4 960	17 902
65 years and over	8 135	2 288	10 536	188	16 586	16 745
Male householder	2 606	1 133	4 805	71	2 989	5 471
Less than 35 years	1 879	631	4 251	64	944	9 770
35 to 54 years	5 161	2 031	5 389	133	4 522	7 621
55 to 64 years	10 551	5 189	(B)	379	11 093	(B)
65 years and over	7 307	3 654	9 686	167	10 608	(B)
Female householder	1 610	859	5 019	41	1 731	8 631
Less than 35 years	1 635	481	20 331	48	3 819	23 301
35 to 54 years	3 028	1 347	14 532	48	1 763	12 558
55 to 64 years	4 849	1 964	6 092	88	6 708	17 603
65 years and over	3 127	1 795	5 523	106	2 752	(B)
LABOR FORCE ACTIVITY OF HOUSEHOLDERS UNDER 65 YEARS						
Total	2 041	425	2 517	36	2 146	5 357
With labor force activity	2 260	408	2 399	36	2 251	5 460
With job entire period	2 448	428	2 481	36	2 338	5 602
With job part of period	3 917	1 011	(B)	278	2 607	6 170
No job during period, spent time looking or on layoff	5 351	2 947	(B)	82	(B)	(B)
No labor force activity	4 215	2 199	11 249	153	6 936	25 607
MONTHLY HOUSEHOLD INCOME						
Lowest quintile	1 462	552	2 841	52	3 605	7 257
Second quintile	1 938	663	2 340	67	1 784	8 703
Third quintile	2 176	864	3 459	45	2 387	4 488
Fourth quintile	2 731	868	4 396	58	2 065	7 283
Highest quintile	7 758	1 395	5 580	114	6 368	12 954
HOUSEHOLD NET WORTH						
Negative or zero	554	141	(B)	29	368	4 649
$1 to $4,999	31	36	(B)	27	150	336
$5,000 to $9,999	49	100	(B)	42	224	713
$10,000 to $24,999	107	145	596	40	253	2 480
$25,000 to $49,999	165	234	881	49	394	959
$50,000 to $99,999	285	317	959	64	492	1 327
$100,000 to $249,999	820	719	1 428	92	861	2 414
$250,000 to $499,999	2 297	2 488	4 236	205	2 719	7 089
$500,000 and over	44 353	9 023	16 348	695	31 983	42 904
REGION						
Northeast	3 362	941	4 999	60	2 673	8 022
Midwest	4 967	939	4 622	68	8 906	12 468
South	2 130	903	5 460	68	2 355	5 302
West	4 289	972	6 368	75	3 253	12 167
TENURE						
Owner	2 740	610	2 858	46	3 262	6 132
Renter	957	609	7 584	44	1 845	5 896

See footnotes at end of table.

Table C-7. **Standard Errors for the Mean Value of Asset Holdings of Asset Owners, by Selected Characteristics: 1988**—Con.

(In dollars. Excludes persons in group quarters. For meaning of symbols, see text)

Charactersitic	Equity in motor vehicles	Equity in own home	Rental property equity	Other real estate equity	U.S. savings bonds	IRA or KEOGH accounts	Other assets[3]
Total	62	810	5 515	1 846	180	550	5 643
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER							
White	68	868	5 981	1 938	196	579	5 895
Black	100	1 447	4 070	1 750	130	638	(B)
Hispanic origin[4]	192	3 174	9 369	7 800	260	1 282	(B)
AGE OF HOUSEHOLDER							
Less than 35 years	76	1 233	5 150	4 949	96	417	1 668
35 to 44 years	149	1 716	5 639	4 086	149	603	2 082
45 to 54 years	174	2 084	21 148	4 236	339	768	30 757
55 to 64 years	198	2 091	12 591	3 818	613	1 526	6 327
65 years and over	130	1 614	6 248	3 658	772	2 279	7 512
65 to 69 years	241	2 951	10 563	4 702	1 223	3 095	7 595
70 to 74 years	245	3 014	9 685	6 868	1 704	4 308	14 402
75 years and over	177	2 464	11 737	8 099	1 165	2 134	15 652
EDUCATION OF HOUSEHOLDER							
Less than 12 years	108	1 231	6 758	2 495	471	1 054	3 934
High school: 4 years	113	1 118	9 114	2 353	310	944	3 732
College: 1 to 3 years	120	1 796	14 644	3 908	416	888	7 445
4 or more years	150	2 312	11 030	4 393	296	1 085	14 841
TYPE OF HOUSEHOLD BY AGE OF HOUSEHOLDER							
Married-couple households	88	1 034	7 301	2 099	224	715	8 186
Less than 35 years	106	1 583	6 762	5 909	128	576	1 491
35 to 54 years	151	1 549	13 624	3 267	206	620	18 977
55 to 64 years	260	2 619	14 604	4 224	698	1 879	8 446
65 years and over	200	2 536	8 873	4 308	1 145	3 008	11 403
Male householder	123	2 017	10 945	7 218	459	1 389	5 309
Less than 35 years	168	1 587	10 815	14 068	176	908	5 766
35 to 54 years	223	3 807	22 279	12 191	512	1 013	8 517
55 to 64 years	519	5 177	(B)	(B)	2 629	5 845	(B)
65 years and over	271	4 527	12 266	(B)	(B)	6 725	(B)
Female householder	78	1 554	6 144	3 765	362	466	3 838
Less than 35 years	120	2 969	(B)	(B)	146	427	(B)
35 to 54 years	145	3 458	10 615	4 843	249	558	5 217
55 to 64 years	258	4 034	(B)	10 667	1 372	630	7 083
65 years and over	142	2 001	9 777	6 937	935	2 057	7 772
LABOR FORCE ACTIVITY OF HOUSEHOLDERS UNDER 65 YEARS							
Total	71	932	7 146	2 119	158	525	7 171
With labor force activity	72	993	7 729	2 223	143	487	8 037
With job entire period	76	1 028	8 072	2 304	149	499	8 543
With job part of period	230	4 371	(B)	5 113	409	2 769	14 260
No job during period, spent time looking or on layoff	364	7 155	(B)	(B)	(B)	(B)	(B)
No labor force activity	283	2 676	12 285	6 943	988	3 240	9 611
MONTHLY HOUSEHOLD INCOME							
Lowest quintile	108	1 818	5 436	8 846	634	2 142	4 195
Second quintile	99	1 579	6 965	2 029	511	1 954	3 559
Third quintile	108	1 390	6 520	4 572	369	931	8 084
Fourth quintile	134	1 529	5 660	2 942	269	989	5 696
Highest quintile	167	2 030	12 981	3 546	362	933	13 717
HOUSEHOLD NET WORTH							
Negative or zero	112	1 712	(B)	(B)	103	892	(B)
$1 to $4,999	46	259	(B)	(B)	40	188	(B)
$5,000 to $9,999	93	214	(B)	(B)	132	223	(B)
$10,000 to $24,999	105	277	2 131	752	117	289	788
$25,000 to $49,999	112	285	1 391	759	131	327	1 303
$50,000 to $99,999	114	415	1 452	964	226	320	1 305
$100,000 to $249,999	160	944	2 019	1 466	328	441	1 667
$250,000 to $499,999	335	3 223	5 350	4 708	1 152	1 649	4 392
$500,000 and over	929	10 901	36 155	13 602	1 963	5 665	44 540
REGION							
Northeast	142	2 398	7 688	5 820	378	896	5 753
Midwest	107	1 381	16 269	1 665	382	958	19 086
South	112	1 018	4 785	2 814	300	1 275	5 158
West	149	1 966	12 154	4 822	366	1 205	5 036
TENURE							
Owner	83	810	6 101	2 017	216	639	6 828
Renter	71	(B)	8 003	4 573	251	665	3 232

[1]Includes passbook savings accounts, money market deposit accounts, certificates of deposit, and interest-earning checking accounts.
[2]Includes money market funds, U.S. Government securities, municipal and corporate bonds, and other interest-earning assets.
[3]Includes mortgages held from sale of real estate, amount due from sale of a business, unit trusts, and other financial investments.
[4]Persons of Hispanic origin may be of any race.

the group have as much or less. The sampling variability of an estimated median depends upon the form of the distribution of the item as well as the size of the group.

Note that the standard errors for all median values given in the report are given in tables C-6 and C-8 thru C-16. However, if the reader desires to calculate standard errors on medians for collapsed groups, the procedure described below may be used. Also note that the medians and their standard errors given in this report will be somewhat different from those calculated using this method since more interval breaks were used than shown.

An approximate method for measuring the reliability of an estimated median is to determine a confidence interval about it. (See the section on sampling variability for a general discussion of confidence intervals.) The following procedure may be used to estimate the 68-percent confidence limits and hence the standard error of a median based on sample data.

1. Determine, using either formula (4) or formula (5), the standard error of an estimate of 50 percent of the group;

2. Add to and subtract from 50 percent the standard error determined in step (1);

3. Using the distribution of the item within the group, calculate the quantity of the item such that the percent of the group owning more is equal to the smaller percentage found in step (2). This quantity will be the upper limit for the 68-percent confidence interval. In a similar fashion, calculate the quantity of the item such that the percent of the group owning more is equal . to the larger percentage found in step (2). This quantity will be the lower limit for the 68-percent confidence interval;

4. Divide the difference between the two quantities determined in step (3) by two to obtain the standard error of the median.

To perform step (3), it will be necessary to interpolate. Different methods of interpolation may be used. The most common are simple linear interpolation and Pareto interpolation. The appropriateness of the method depends on the form of the distribution around the median. For this report, we recommend linear interpolation. Interpolation is used as follows. The quantity of the item such that "p" percent own more is

$$X_{pN} = \frac{N_1 - pN}{N_1 - N_2} (A_2 - A_1) + A_1 \tag{8}$$

where N is size of the group,

A_1 and A_2 are the lower and upper bounds, respectively, of the interval in which X_{pN} falls,

N_1 and N_2 are the estimated number of group members owning more than A_1 and A_2, respectively,

Illustration of the computation of a confidence interval and the standard error for a median To illustrate the calculations for the sampling error on a median, we refer to table C-2.

The median net worth for this group is $5,764. The size of the group is 25,730,000.

1. Using formula (5), the standard error of 50 percent on a base of 25,730,000 is about 0.8 percentage points.

2. Following step (2), the two percentages of interest are 49.2 and 50.8.

3. By examining table C-2, we see that the percentage 49.2 falls in the income interval from $5,000 to $9,999. Thus $A_1 = \$5,000, A_2 = \$9,999, N_1 = 13,405,000$, and $N_2 = 10,575,000$. Therefore, the upper bound of a 68% confidence interval for the median is

$$\frac{13,405,000-(.492)(25,730,000)}{13,405,000-10,575,000}(9,999-5,000)+5,000 = \$6,318$$

Also by examining table C-2, we see that the percentage of 50.8 falls in the same income interval. Thus, A_1, A_2, N_1, and N_2 are the same. So the lower bound of a 68% confidence interval for the median is

$$\frac{13,405,000-(.508)(25,730,000)}{13,405,000-10,575,000}(9,999-5,000)+5,000 = \$5,590$$

Table C-2. **Distribution of Household Net Worth Among Households With Householders Less Than 35 Years of Age**

	Total	Zero or negative	$1 to $4,999	$5,000 to $9,999	$10,000 to $24,999	$25,000 to $49,999	$50,000 to $99,999	$100,000 to $249,999	$250,000 to $499,999	$500,000 or over
Thousands in interval........	25,730	4889	7436	2830	4426	3062	2110	746	154	77
Percent with at least as much as lower bound of interval...	(X)	100.0	81.0	52.1	41.1	23.9	12.0	3.8	0.9	0.3

Thus, the 68-percent confidence interval on the estimated median is from $5,590 to $6,318. An approximate standard error is

$$\frac{\$6,318\text{-}\$5,590}{2} = \$364$$

Standard errors of ratios of means and medians. The standard error for a ratio of means or medians is approximated by:

$$s\frac{x}{y} = \left[\frac{x}{y}\right]\sqrt{\left[\frac{s_y}{y}\right]^2 + \left[\frac{s_x}{x}\right]^2} \qquad (9)$$

where x and y are the means or medians, and s_x and s_y are their associated standard errors. Formula (9) assumes that the means or medians are not correlated. If the correlation between the two means or medians is actually positive (negative), then this procedure will provide an overestimate (underestimate) of the standard error for the ratio of means and medians.

Table C-8. **Standard Errors for Median Values of Asset Holdings by Asset Type: 1988 and 1984**

(Excludes group quarters)

Asset type	1988 Median value of holdings for asset owners	1984 (in 1988 dollars) Median value of holdings for asset owners
Interest-earning assets at financial institutions..............................	$100	$104
Other interest-earning assets	579	936
Checking accounts........................	10	10
Stocks and mutual fund shares	231	241
Own home	468	502
Rental property..........................	2,132	1,997
Other real estate.........................	733	1,300
Vehicles	54	58
Business or profession....................	393	1,169
U.S. savings bonds.......................	38	18
IRA or KEOGH accounts	254	124
Other financial investments[1]...............	1,202	1,342
Unsecured liabilities[2].....................	40	31

[1]Includes mortgages held from sale of real estate, amount due from sale of business, unit trusts, and other financial investments.
[2]Since net worth is the value of assets less liabilities, unsecured liabilities are subtracted from the distribution of net worth and are shown as negatives.

Table C-9. **Standard Errors of Median Net Worth, by Monthly Household Income Quintiles: 1988 and 1984**

Monthly household income quintiles[1]	1988 Median net worth	1984 (In 1988 dollars) Median net worth
Total	$779	$781
Lowest quintile	390	641
Second quintile...........................	1,484	1,595
Third quintile.............................	1,405	1,399
Fourth quintile............................	1,677	1,710
Highest quintile...........................	4,755	2,391

[1]Quintile upper limits for 1988 were: lowest quintile - $939; second quintile - $1,699; third quintile - $2,568; fourth quintile - $3,883. Upper limits for 1984 were: lowest quintile - $811; second quintile - $1,471; third quintile - $2,221; fourth quintile - $3,298.

Table C-10. Standard Errors for Median Value of Holdings, by Monthly Household Income Quintile, for Selected Asset Types: 1988 and 1984

(Excludes group quarters)

Monthly household income quintile[1]	Interest-earning assets at financial institutions[2]	Other interest-earning assets[3]	Stocks and mutual fund shares	Equity in own home	Equity in motor vehicles	Equity in own business or profession	IRA or KEOGH accounts
Median Value of Holdings for Asset Owners:							
In 1988:							
Total	$100	$579	$231	$468	$54	$1,026	$254
Lowest quintile	157	1,249	410	1,081	56	1,206	821
Second quintile	258	1,056	180	995	65	1,933	742
Third quintile	118	1,174	289	1,114	95	600	471
Fourth quintile	138	1,245	303	1,120	107	1,525	332
Highest quintile	299	1,461	502	1,480	126	3,652	473
In 1984 (in 1988 dollars):							
Total	$104	$936	$241	$502	$58	$1,167	$124
Lowest quintile	183	2,144	611	910	85	1,374	206
Second quintile	269	1,904	354	1,188	71	2,202	195
Third quintile	138	1,857	427	1,114	98	683	121
Fourth quintile	159	1,522	286	1,032	92	1,737	133
Highest quintile	399	548	319	1,237	133	4,160	161

[1]Quintile upper limits for 1988 were: Lowest quintile - $939; second quintile - $1,699; third quintile - $2,568; fourth quintile - $3,883. Upper limits for 1984 were: lowest quintile - $811; second quintile - $1,471; third quintile - $2,221; fourth quintile - $3,298.

[2]Includes passbook savings accounts, money market deposit accounts, certificates of deposits, and interest-earning checking accounts.

[3]Includes money market funds, U.S. Government securities, municipal and corporate bonds, and other interest-earning assets.

Table C-11. **Standard Errors of Median Net Worth, by Age of Householder and Monthly Household Income Quintile: 1988**

(Excludes group quarters)

Monthly household income quintile[1]	Total	Less than 35 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over			
						Total	65 to 69 years	70 to 74 years	75 years and over
Median income..................	$20	$28	$38	$47	$41	$23	$42	$44	$30
Median net worth...............	779	291	1264	1,953	2,684	1,950	4,414	4,807	2,711
Excluding home equity	240	126	357	863	1,579	1,132	1,678	2,376	1,251
Net worth by income quintile									
Lowest quintile:									
Median net worth..............	390	81	185	1,115	3,447	1,717	2,785	28,880	2,370
Excluding home equity	85	138	190	147	315	407	526	834	684
Second quintile:									
Median net worth..............	1,484	224	1,704	3,363	4,343	2,762	5,886	4,141	4,755
Excluding home equity	324	168	285	810	1,633	1,782	2,932	3,069	3,269
Third quintile:									
Median net worth..............	1,405	349	1,701	2,618	6,430	7,305	13,496	13,107	11,393
Excluding home equity	397	216	417	997	3,363	4,396	6,097	7,900	12,950
Fourth quintile:									
Median net worth..............	1,677	1,088	2,303	3,539	7,245	11,084	15,550	22,663	21,792
Excluding home equity	658	3,83	652	1,360	2,918	11,976	9,481	26,856	24,422
Highest quintile:									
Median net worth..............	4,755	3,010	3,652	8,037	9,082	26,430	37,422	58,915	46,307
Excluding home equity	1,642	1,051	1,868	3,226	6,991	17,752	23,618	45,010	55,903

[1]Quintile upper limits for 1988 were: lowest quintile - $939; second quintile - $1,699; third quintile - $2,568; fourth quintile - $3,883.

Table C-12. **Standard Errors of Median Net Worth, by Age of Householder and Monthly Household Income Quintile: 1984 in 1988 dollars**

(Excludes group quarters)

Monthly household income quintile[1]	Total	Less than 35 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over			
						Total	65 to 69 years	70 to 74 years	75 years and over
Median income..................	$24	$34	$52	$83	$73	$31	$63	$54	$33
Median net worth...............	781	344	1,530	2,018	2,294	1,854	3,258	3,571	2,930
Excluding home equity	232	125	392	917	1,378	1,137	2,706	2,311	1,877
Net worth by income quintile									
Lowest quintile:									
Median net worth..............	$641	$147	$502	$2,332	$4,336	$1,642	$4,028	$3,496	$2,685
Excluding home equity	77	125	150	295	515	380	415	710	595
Second quintile:									
Median net worth..............	$1,595	$241	$1,975	$3,796	$5,824	$2,437	$4,725	$4,764	$3,747
Excluding home equity	347	165	366	693	2,235	2,187	1,760	3,681	3,379
Third quintile:									
Median net worth..............	$1,399	$625	$2,262	$3,826	$5,514	$4,357	$5,671	$15,826	$16,560
Excluding home equity	335	237	491	1,534	2,614	3,863	3,644	7,960	8,360
Fourth quintile:									
Median net worth..............	$1,710	$1,195	$2,879	$3,803	$4,105	$11,903	$17,840	$28,957	$18,887
Excluding home equity	538	319	744	1,162	3,652	8,569	11,450	15,169	29,449
Highest quintile:									
Median net worth..............	$2,391	$2,540	$3,699	$8,181	$10,926	$23,100	$22,476	$79,830	$60,402
Excluding home equity	1,617	870	2,040	3,089	6,657	25,424	38,557	50,717	45,303

[1]Quintile upper limits for 1984 were: lowest quintile - $811; second quintile - $1,471; third quintile - $2,221; fourth quintile - $3,298.

Table C-13. **Standard Errors for Median Net Worth, by Race and Hispanic Origin of Householder and Monthly Household Income Quintile: 1988 and 1984**

(Excludes group quarters)

Monthly household income quintile[2]	Total		White		Black		Hispanic origin[1]	
	1988	1984 (in 1988 dollars)	1988	1984 (in 1988 dollars)	1988	1984 (in 1988 dollars)	1988	1984 (in 1988 dollars)
Median income.....................	$20	$24	$15	$27	$32	$47	$53	$73
Median net worth..................	779	781	924	913	446	281	796	1,066
Mean net worth	1,838	2,222	2,097	2,531	1,016	1,150	2,737	4,136
Net Worth by Income Quintile[2]								
Lowest quintile:								
Median net worth................	390	641	1,190	1,271	32	46	262	219
Mean net worth	1,462	1,409	1,843	1,750	1,026	973	2,624	3,704
Second quintile:								
Median net worth................	1,484	1,595	1,775	2,254	454	568	843	644
Mean net worth	1,938	1,795	2,222	1,996	1,476	3,127	3,941	3,276
Third quintile:								
Median net worth................	1,405	1,399	1,836	1,585	1,965	1,409	2,374	3,523
Mean net worth	2,176	1,983	2,410	2,201	2,367	2,062	5,092	7,724
Fourth quintile:								
Median net worth................	1,677	1,710	1,921	1,704	2,520	2,704	3,257	7,972
Mean net worth	2,731	2,597	2,981	2,804	3,405	3,280	6,283	6,683
Highest quintile:								
Median net worth................	4,755	2,391	4,856	2,793	5,361	5,186	7,288	19,860
Mean net worth	7,758	9,978	8,323	10,695	6,079	5,521	13,680	26,069

[1]Persons of Hispanic origin may be of any race.
[2]Quintile upper limits for 1988 were: Lowest quintile - $939; second quintile - $1,699; third quintile - $2,568; fourth quintile - $3,883. Upper limits for 1984 were: lowest quintile - $811; second quintile - $1,471; third quintile - $2,221; fourth quintile - $3,298.

Table C-14. **Standard Errors of Median Net Worth, by Race and Hispanic Origin of Householder, and Age of Householder: 1988 and 1984**

(Excludes group quarters)

Median net worth by age of householder	Total		White		Black		Hispanic origin[1]	
	1988	1984	1988	1984	1988	1984	1988	1984
Median net worth[2]								
All households	$779	$781	$924	$913	$446	$281	$796	$1,066
Under 35 years....................	291	344	409	417	126	159	337	413
35 to 44 years	1,264	1,530	1,630	1,658	1,209	632	2,274	4,369
45 to 54 years	1,953	2,018	2,528	2,662	1,543	2,799	9,339	9,271
55 to 64 years	2,684	2,294	3,393	2,584	3,653	3,750	4,798	13,757
65 years and over.................	1,950	1,854	2,481	1,826	3,282	2,437	8,061	6,259

[1]Persons of Hispanic origin may be of any race.
[2]1984 median net worth is in 1988 dollars.

Table C-15. **Standard Errors for Median Net Worth, by Type of Household and Age of Householder: 1988 and 1984**

(Excludes group quarters)

Type of household by age of householder	1988			1984 (in 1988 dollars)		
		Median net worth			Median networth	
	Median monthly household income	Total	Excluding equity in own home	Median monthly household income	Total	Excluding equity in own home
Married-couple households	$20	$1,139	$452	$30	$1,222	$3,633
Less than 35 years	39	686	235	39	644	210
35 to 54 years	64	1,605	639	49	1,425	663
55 to 64 years	49	6,069	2,440	75	3,139	1,939
65 years and over	34	6,099	2,344	43	3,883	2,426
Male householders	33	988	335	47	954	368
Less than 35 years	53	414	220	55	360	206
35 to 54 years	65	1,870	778	116	2,697	1,044
55 to 64 years	125	4,430	1,380	162	4,813	2,441
65 years and over	56	5,543	2,554	68	4,842	2,623
Female householders	20	1,023	203	32	1,130	186
Less than 35 years	39	181	114	59	207	112
35 to 54 years	41	1,016	296	68	1,617	350
55 to 64 years	62	3,648	1,007	75	3,098	1,292
65 years and over	18	2,048	803	31	2,647	1,015

Table C-16. **Standard Errors of Median Net Worth, by Race and Hispanic Origin of Householder, and Type of Household: 1988 and 1984**

(Excludes group quarters)

Median net worth by type of householder	Total		White		Black		Hispanic origin[1]	
	1988	1984	1988	1984	1988	1984	1988	1984
Median Net Worth[2]								
All Households	$779	$781	$924	$913	$446	$281	$796	$1,066
Married-couple households	1,139	1,222	1,273	1,193	1,701	1,535	3,146	2,079
Male householders	988	954	1,270	1,068	369	480	1,272	1,481
Female householders	1,023	1,130	1,373	1,460	179	172	381	387

[1]Persons of Hispanic origin may be of any race.
[2]1984 median net worth is in 1988 dollars.